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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,631	07/01/2003	Joseph T. Pesik	21220/04152 (GR201AS407A)	1413
24024	7590	04/20/2005	EXAMINER	
CALFEE HALTER & GRISWOLD, LLP 800 SUPERIOR AVENUE SUITE 1400 CLEVELAND, OH 44114			CHERRY, EUNCHA P	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/611,631	<b>Applicant(s)</b> PESIK, JOSEPH	
	<b>Examiner</b> EUNCHA P. CHERRY	<b>Art Unit</b> 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

~~A~~ SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracy et al (US 4,963,012) in view of Yoshizawa et al (US 5,650,353).

Tracy et al discloses a macroscopic mirror (Fig. 8) comprising:

a silicon substrate (132) of a predetermined shape and macroscopic cut (inherent see Fig. 7) from a silicon wafer;

a plurality of layers (134, 136) including a layer of reflective medium (136) disposed on the silicon substrate in a manner to minimize flexural distortion of the surface (see column 8, lines 65-68);

the reflective medium being selected for an at least one wavelength of radiation to be reflected thereby (inherent 136 is silver);

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the plurality of layers are a bottom primer layer (130), a middle reflective medium (136) and a top protective coating layer (Fig. 9, 138 and column 9, lines 1-5);

s side of the silicon substrate serves as a backing plate for bonding the mirror to a scan drive mechanism (see column 1, lines 61-65);

each layer of the plurality of layers is sputtered to a predetermined thickness (see Fig. 9).

Tracy et al does not disclose the silicon substrate that comprise a flat polished surface and an etched rough surface.

Yoshizawa et al disclose a silicon substrate that comprise a flat polished surface and an etched rough surface (see column 4, lines 15-15) and the substrate section is cut from the silicon wafer (see column 5). It would have been obvious to one of ordinary skill in the art to use the technique of etching and polishing the silicon wafer before cut as taught by Yoshizawa et al for the purpose of increasing bonding between the layers while maintaining strong grips between the layers using the etched and polished surfaces.

The method of making the mirror is inherently met by the disclosure of the prior art.

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3. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracy et al (US 4,963,012) in view of Yoshizawa et al (US 5,650,353).

Tracy et al in view of Yoshizawa et al discloses the claimed invention as set forth above except that dimensions of thermal distortion coefficient, thickness or dimension of the silicon substrate. It would have been obvious to one of ordinary skill in the art to choose these dimensions since it has been held that discovering an optimum values only involves routine skill in the art.

#### ***Response to Arguments***

4. Applicant's arguments, filed on 2/3/05, with respect to the rejection(s) of claim(s) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

#### ***Conclusion***

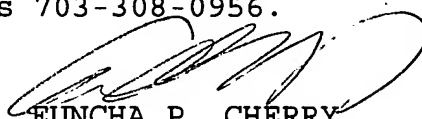
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EUNCHA P.

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CHERRY whose telephone number is 571-272-2310. The examiner can normally be reached on M-F 6:30-4:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DREW DUNN can be reached on 571-272-2312. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
EUNCHA P. CHERRY  
Primary Examiner  
Art Unit 2872

April 18, 2005